

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

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# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference <b>E35253 JFL/J</b>		Date of mailing (day/month/year) <b>27 -10- 2004</b>
FOR FURTHER ACTION See paragraph 2 below		
International application No. <b>PCT/NO 2004/000167</b>	International filing date (day/month/year) <b>10.06.2004</b>	Priority date (day/month/year) <b>01.07.2003</b>
International Patent Classification (IPC) or both national classification and IPC <b>B65G 47/76 , B65G 47/84 // B07C 3/06</b>		
Applicant <b>Tomra Systems A/S et al</b>		

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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International application No.

PCT/NO 2004/000167

Box No. I      Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language, \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

- ☐ a sequence listing  
☐ table(s) related to the sequence listing

b. format of material

- ☐ in written format  
☐ in computer readable form

c. time of filing/furnishing

- ☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

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PCT/NO 2004/000167

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	2-4, 7-9, 14-16, 20-25	YES
	Claims	1, 5-6, 10-13, 17-19	NO
Inventive step (IS)	Claims	2-4, 7-9, 14-16, 20-24	YES
	Claims	1, 5-6, 10-13, 17-19, 25	NO
Industrial applicability (IA)	Claims	1-25	YES
	Claims		NO

2. Citations and explanations:

The invention relates to a device for directionally guiding articles of different shapes, which are being conveyed on a conveyor, off the conveyor using a movable gate that is controllable to move across the conveyor at an angle to the direction of travel of the article on the conveyor. Often, the articles are slowed unduly by such a gate, especially if the gate forms a large angle with the direction of travel of the conveyor. According to the invention, the gate has at least one motor driven rotatable disc which, upon movement of the gate across the conveyor, forcibly causes the article to be driven along the gate, in a direction corresponding to said angle, off the conveyor and to an exit.

Reference is made to the following documents:

D1:DE 2728936 A1

D2:US 4564105 A

The document D1 is regarded as being the closest prior art to the subject-matter of the claims, and discloses a device for directionally guiding articles, which are conveyed on a conveyor, off the conveyor with the aid of a movable gate that is controllable to move across the conveyor at an angle to the direction of travel of the article on the conveyor. The gate consists of one or two motor-driven discs (13;3) equipped with a friction surface (15) that, upon movement of the gate across the conveyor, cause the article to be forcibly driven along the gate. The disc(s) have a non-vertical axis of rotation.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.  
Continuation of: BOX V

Thus, in view of D1, the invention claimed in claims 1 and 5 is not novel.

Further, from US 4564105 A, a device is known for directionally guiding articles, which are conveyed on a conveyor, off the conveyor with the aid of a movable gate that is controllable to move across the conveyor at an angle to the direction of travel of the article on the conveyor. The gate consists of a motor-driven spiral shaped sweep disc rotated to cause it to engage a selected article on the conveyor. The spiral shape then rapidly accelerates the lateral or sideways movement of the article to push it off the conveyor as the article is forcibly driven along the gate. The spiral shaped sweep disc has a non-vertical, non-horizontal axis of rotation. The cycling of the spiral shaped sweep disc can be controlled in a number of ways. For example, each article could have a code applied to it which is read as the article passes a reader upstream of the sweep. If the reader finds a code to which the reader is supposed to respond, it transmits this information to the sweep's drive. The speed is set depending on, for example, a combination of the size of the article and the speed of the main conveyor.

Thus, in view of D2, the invention claimed in claims 1, 5-6, 10-13 and 17-19 is not novel.

Further, in D1-D2 it is stated that the device could be used to sort articles of various kinds. Therefore, in view of the cited prior art, the features specified in claim 25 are all measures considered as obvious to a person skilled in the art.

Thus, the invention as claimed in claim 25 is not considered to involve an inventive step.

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